STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	/0/573,600
Source:	IFW,P.
Date Processed by STIC:	4/6/06

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 4.4.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (http://www.uspto.gov/ebc/efs/downloads/documents.htm, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
- Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
 U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street,
 Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION SERIAL NUMBER: 10/573, 600
ATTN: NEW RULES CASES:	PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE
1Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3Misaligned Amino Numbering	The numbering under each 5 th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5Variable Length	Sequence(s)contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6Patentin 2.0 "bug"	A "bug" in Patentln version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) Normally, Patentln would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7Skipped Sequences (OLD RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8Skipped Sequences (NEW RULES)	Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220><223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <13> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <13> response is Unknown or is Artificial Sequence. (see item 11 below)
11Use of <220>	Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section or use "chemically synthesized" as explanation. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32), also Sec. 1.823 of Sequence Rules
12PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of Patentln version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13 Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

AMC - STIC Systems Branch - 03/02/06



IFWP

RAW SEQUENCE LISTING DATE: 04/06/2006
PATENT APPLICATION: US/10/573,600 TIME: 10:49:35

Input Set : A:\UPN-P3230-sequence listing.txt
Output Set: N:\CRF4\04062006\J573600.raw

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3 <110> APPLICANT: The Trustees of the University of Pennsylvania
             Wilson, James M.
             Gao, Guangping
             Alvira, Mauricio R.
             Vandenberghe, Luk H.
     9 <120> TITLE OF INVENTION: Adeno-Associated Virus (AAV) Clades, Sequences, Vectors
             Containing Same, and Uses Therefor
                                         12 <130> FILE REFERENCE: UPN-P3230PCT
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/573,600
C--> 14 <141> CURRENT FILING DATE: 2006-03-24
    14 <150> PRIOR APPLICATION NUMBER: US 60/508,226
    15 <151> PRIOR FILING DATE: 2003-09-30
    17 <160> NUMBER OF SEQ ID NOS: 236
    19 <170> SOFTWARE: PatentIn version 3.3
    21 <210> SEQ ID NO: 1
    22 <211> LENGTH: 2211
    23 <212> TYPE: DNA
    24 <213> ORGANISM adeno-associated virus, clone hu.31
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    29 gagtggtggg ctttgaaacc tggagcccct caacccaagg caaatcaaca acatcaagac
    31 aacgetegag gtettgtget teegggttae aaatacettg gaceeggeaa eggaetegae
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    33 aagggggage eggteaaege ageagaegeg geggeeeteg ageaegaeaa ggeetaegae
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    35 cagcagetea aggeeggaga caaceegtae etcaagtaca accaegeega egeegagtte
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    37—caggagegge-teaaagaaga taegtetttt gggggeaace tegggegage agtetteeag
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    39 gecaaaaaga ggettettga acetettggt etggttgagg aageggetaa gaeggeteet
    41 ggaaagaaga ggcctgtaga gcagtctcct caggaaccgg actcctccgc gggtattggc
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    43 aaategggtg cacageeege taaaaagaga etcaattteg gtcagaetgg egacacagag
                                                                            600
    45 tragtrocag accetraace aateggagaa cetrocgrag coccetragg tgtgggatet
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    47 cttacaatgg cttcaggtgg tggcgcacca gtggcagaca ataacgaagg tgccgatgga
    49 gtgggtagtt cctcgggaaa ttggcattgc gattcccaat ggctggggga' cagagtcatc
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    51 accaccagca cocgaacctg ggeoctgccc acctacaaca atcacctcta caagcaaatc
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    53 tecaacagca catetggagg atetteaaat gacaacgcet aetteggeta Cagcaccec
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    55 tgggggtatt ttgacttcaa cagattccac tgccacttct caccacgtga ctggcagcga
                                                                            900
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    57 ctcatcaaca acaactgggg attccggcct aagcgactca acttcaagct Cttcaacatt
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    59 caggtcaaag aggttacgga caacaatgga gtcaagacca tcgccaataa ccttaccagc
    61 acggtccagg tetteacgga etcagactat cageteecgt acgtgetegg gteggeteac
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    63 gagggetgee tecegeegtt eeeageggae gtttteatga tteeteagta egggtatetg
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    65 acgettaatg atggaageea ggeegtgggt egttegteet tttaetgeet ggaatattte
    67 ccgtcgcaaa tgctaagaac gggtaacaac ttccagttca gctacgagtt tgagaacgta
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    69 cetttecata geagetacge teacageeaa ageetggace gaetaatgaa tecacteate
    71 gaccaatact tgtactatct ctcaaagact attaacggtt ctggacagaa tcaacaaacg
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RAW SEQUENCE LISTING DATE: 04/06/2006 PATENT APPLICATION: US/10/573,600 TIME: 10:49:35

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79 ggacctgcta tggccagcca caaagaagga gaggaccgtt tctttccttt gtctggatct
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81 ttaatttttg gcaaacaagg aactggaaga gacaacgtgg atgcggacaa agtcatgata
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83 accaacgaag aagaaattaa aactactaac ccggtagcaa cggagtccta tggacaagtg
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85 gccacaaacc accagagtgc ccaagcacag gcgcagaccg gctgggttca aaaccaagga
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87 atacttccgg gtatggtttg gcaggacaga gatgtgtacc tgcaaggacc catttgggcc
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89 aaaattcctc acacggacgg caactttcac ccttctccgc tgatgggagg gtttggaatg
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91 aagcacccgc ctcctcagat cctcatcaaa aacacacctg tacctgcgga tcctccaacg
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93 gccttcaaca aggacaagct gaactctttc atcacccagt attctactgg ccaagtcagc
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95 gtggagatcg agtgggagct gcagaaggaa aacagcaagc gctggaaccc ggagatccag
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97 tacacttcca actattacaa gtctaataat gttgaatttg ctgttaatac tgaaggtgta
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103 <211> LENGTH: 2211
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104 <212> TYPE: DNA //
105 <213> ORGANISM: new AAV serotype, clone hu.32
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110 cagtggtgga ageteaaace tggcccacca ecaecaaage eegcagageg gcataaggae
                                                                          120
                                                                          180
112 gacagcaggg gtettgtget teetgggtae aagtaceteg gaceeggeaa eggaetegae
114 aagggggagc eggtcaacgc agcagacgcg geggccctcg agcacgacaa ggcctacgac
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116 cagcagetea aggeeggaga caaccegtae etcaagtaca accaegeega egeegagtte
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118 caggagegge teaaagaaga taegtetttt gggggeaace tegggegage agtetteeag
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120 gccaaaaaga ggcttcttga acctcttggt ctggttgagg aagcggctaa gacggctcct
122 ggaaagaaga ggcctgtaga gcagtctcct caggaaccgg actcctccgc gggtattggc
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124 aaatcgggtt cacagcccgc taaaaagaaa ctcaatttcg gtcagactgg cgacacagag
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128 cttacaatgg cttcaggtgg tggcgcacca gtggcagaca ataacgaagg tgccgatgga
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130 gtgggtagtt cctcgggaaa ttggcattgc gattcccaat ggctggggga cagagtcatc
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132 accaccagca cccgaacctg ggccctgccc acctacaaca atcacctcta caagcaaatc
134 tecaacagea catetggagg atetteaaat gacaacgeet actteggeta cageaccec
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136 tgggggtatt ttgacttcaa cagattccac tgccacttct caccacgtga ctggcagcga
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138 ctcatcaaca acaactgggg attccggcct aagcgactca acttcaagct cttcaacatt
140 caggicaaag aggitacgga caacaatgga gicaagacca tegecaataa cettaccage
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142 acggtccagg tcttcacgga ctcagactat cagctcccgt acgtgctcgg gtcggctcac
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154 ctaaaattca gegtggeegg acceageaac atggetgtee agggaagaaa ctacataeet
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160 ggacctgcta tggccagcca caaagaagga gaggaccgtt tctttccttt gtctggatct
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162 ttaatttttg gcaaacaagg aactggaaga gacaacgtgg atgcggacaa agtcatgata
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166 gccacaaacc accagagtgc ccaagcacag gcgcagaccg gctgggttca aaaccaagga
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/573,600

DATE: 04/06/2006
TIME: 10:49:35

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Output Set: N:\CRF4\04062006\J573600.raw

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170 aaaattcctc acacggacgg caactttcac ccttctccgc taatgggagg gtttggaatg
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172 aagcaccege etecteagat ceteateaaa aacacacetg tacetgegga tectecaaeg
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174 gettteaata aggacaaget gaactettte ateacceagt attetactgg ccaagteage
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176 gtggagattg agtgggagct gcagaaggaa aacagcaagc gctggaaccc ggagatccag
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178 tacacttcca actattacaa gtctaataat gttgaatttg ctgttaatac tgaaggtgta
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                                                                         2211
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185 <212> TYPE: DNA
186 <213> ORGANISM: adeno-associated virus, human clone 9
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193 aacqctcgag gtcttgtgct tccgggttac aaataccttg gacccggcaa cggactcgac
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195 aaqqqqqaqc cqgtcaacgc agcagacgcg gcggccctcg agcacgacaa ggcctacgac
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201 gccaaaaaga ggcttcttga acctcttggt ctggttgagg aagcggctaa gacggctcct
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219 ctcatcaaca acaactgggg attceggect aagegactea acttcaaget ettcaacatt
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221 caggtcaaag aggttacgga caacaatgga gtcaagacca tcgccaataa ccttaccagc
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223 acggtccagg tettcaegga etcagaetat cagetceegt acgtgetegg gteggeteae
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225 gagggetgee teeegeegtt eecageggae gtttteatga tteeteagta egggtatetg
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/573,600

DATE: 04/06/2006 TIME: 10:49:35

Input Set: A:\UPN-P3230-sequence listing.txt
Output Set: N:\CRF4\04062006\J573600.raw

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274 gacggccggg gtctggtgct tcctggctgc aagtacctcg gacccttcaa cggactcgac
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282 gccaagaagc gggttctcga acctctcggt ctggttgagg aaggcgctaa gacggctcct
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284 ggaaagaaga gaccggtaga gccatcaccc cagcgttctc cagactcctc tacgggcatc
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326 atgctaacca gtgaggaaga aatcaaaacc accaacccag tggccacaga acagtacggc
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328 gtggtggccg ataacctgca acagcaaaac gccgctccta ttgtaggggc cgtcaacagt
                                                                         1800
330 caaggageet taeetggeat ggtetggeag aacegggaeg tgtaeetgea gggteetate
                                                                         1860
                                                                         1920
332 tgggccaaga ttcctcacac ggacggcaac tttcatcctt cgccgctgat gggaggcttt
334 ggactgaaac accegeetee teagateetg attaagaata cacetgttee egeggateet
                                                                         1980
336 ccaactacct tcagtcaagc caagctggcg tcgttcatca cgcagtacag caccggacag
                                                                         2040
338 gtcagcgtgg aaattgaatg ggagctgcag aaagagaaca gcaagcgctg gaacccagag
                                                                         2100
340 attragtata cttrcaacta taacaaatrt gttaatgtgg actttactgt ggacactaat
                                                                         2160
342 ggtgtgtatt cagagecteg ecceattgge accagatace tgactegtaa tetgtaa
                                                                         2217
345 <210> SEQ ID NO: 5
346 <211> LENGTH: 2217
347 <212> TYPE: DNA
348 <213> ORGANISM new AAV serotype, clone hu.6
350 <400> SEQUENCE: 5
                                                                           60
351 atggctgccg atggttatct tccagattgg ctcgaggaca acctetetga gggcattege
353 gagtggtggg acttgaaacc tggagccccg aaacccaaag ccaaccagca aaagcaggac
                                                                          120
355 gaeggeeggg gtetggtget teetggetae aagtaceteg gaecetteaa eggaetegae
                                                                          180
```

RAW SEQUENCE LISTING DATE: 04/06/2006 PATENT APPLICATION: US/10/573,600 TIME: 10:49:35

Input Set: A:\UPN-P3230-sequence listing.txt
Output Set: N:\CRF4\04062006\J573600.raw

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357 aagggggage cegteaacge ggeggaegea geggeeeteg ageaegaeaa ggeetaegae
359 cagcagetea aagegggtga caateegtae etgeggtata aecaegeega egeegagttt
361 caggagcgtc tgcaagaaga tacgtctttt gggggcaacc tegggcgagc agtcttccag
                                                                            420
363 gccaagaage gggttetega aceteteggt etggttgagg aaggegetaa gaeggeteet
365 ggaaagaaga gaccggtaga gccatcaccc cagcgttctc cagactcctc tacgggcatc
367 ggcaagacag gccagcagcc cgcgaaaaag agactcaact ttgggcagac tggcgactca
                                                                            600
369 gagtcagtgc ccgaccctca accaatcgga gaaccccccg caggcccctc tggtctggga
371 tctggtacaa tggctgcagg cggtggcgct ccaatggcag acaataacga aggcgccgac
                                                                            660
373 ggagtgggta gttcctcagg aaattggcat tgcgattccg catggctggg cgacagagtc
                                                                            720
375 atcaccacca gcacccgacc ctgggccctc cccacctaca acaaccacct ctacaagcaa
                                                                            780
377 atctccaacg ggacatcggg aggaagcacc aacgacaaca cctacttcgg ctacagcacc
                                                                            840
                                                                            900
379 ccctgggggt attttgactt taacagattc cactgccact tctcaccacg tgactggcag
                                                                            960
381 egacteatea acaacaactg gggatteegg eccaagagae teaactteaa getetteaac
                                                                          1020
383 atccaggtca aggaggtcac gcagaatgaa ggcaccaaga ccatcgccaa taaccttacc
                                                                           1080
385 ageacgattc aggtetttac ggacteggaa taccagetee egtacgteet eggetetgeg
                                                                           1140
387 caccaggget geoegeetee gtteeeggeg gaegtettea tgatteetea gtaegggtae
                                                                           1200
389 etgactetga acaaeggeag teaggeegtg ggeegtteet cettetaetg eetggagtae
391 tttccttctc aaatgcggag aacgggcaac aactttgagt tcagctacca gtttgaggac
                                                                           1260
393 gtgccttttc acagcagcta cgcgcatagc caaagcctgg accggctgat gaaccccctc
                                                                           1320
395 ategaccagt acctgtacta cctgtctcgg actcagtcca cgggaggtac cgcaggaact
                                                                           1380
397 cagcagttgc tattttctca ggccgggcct aataacatgt cggctcaggc caaaaactgg
                                                                           1440
399 ctaccoggc cetgetaceg geageaacge gtetecacga caetgtegea aaataacaac
                                                                           1500
401 ageaactttg cttggaccgg tgccaccaag tatcatctga atggcagaga ctctctggta
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403 aatcccggtg tcgctatggc aacgcacaag gacgacgaag agcgattttt tccatccagc
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405 ggagtettga tgtttgggaa acagggaget ggaaaagaca acgtggaeta tagcagegtt
                                                                           1680
                                                                           1740
407 atgctaacca gtgaggaaga aatcaaaacc accaacccag tggccacaga acagtacggc
409 gtggtggccg ataacctgca acagcaaaac gccgctccta ttgtaggggc cgtcaacagt
                                                                           1800
411 caaggageet tacetggeat ggtetggeag aacegggaeg tgtacetgea gggteetate
                                                                           1860
413 tgggccaaga ttcctcacac ggacggcaac tttcatcctt cgccgctgat gggaggcttt
                                                                           1920
415 ggactgaaac accegectee teagateetg attaagaata cacetgttee egeggateet
                                                                           1980
417 ccaactacet teagteaage caagetggeg tegtteatea egeagtacag caeeggacag
                                                                           2040
419 gtcagcgtgg aaattgaatg ggagctgcag aaagagaaca gcaagcgctg gaacccagag
                                                                          2100
421 atteagtata ettecaacta etacaaatet acaaatgtgg actitgetgt caatactgag
                                                                          2160
                                                                          2217
423 ggtacttatt cagageeteg ceecattgge accegttace teaccegtaa cetgtaa
426 <210> SEQ ID NO: 6
                                                                           Please
Correct

60 Rhs

120
180 Appel
240
300 eva sa
360 eva sa
420
480 subsequent
540 sequences
427 <211> LENGTH: 2217
428 <212> TYPE: DNA
429 <213> ORGANISM: new AAV serotype, clone hu.41
431 <400> SEQUENCS ← 6
432 atggctgctg acggttatct tccagattgg ctcgaggaca acctctctga gggcattcgc
434 gagtggtggg acctgaaacc tggagseccc aagcecaagg ccaaccagca gaagcaggac
436 gacggccggg gtctggtgct tcctggctac aagtacctcg gacccttcaa cggactcgac
438 aagggggage cegteaacge ggeggaegea geggeeeteg ageacgaeaa ggeetaegae
440 cagcagetea aagegggtga caateegtae etgeggtata accaegeega egeegagttt
442 caggagegte tacaagaaga tacgtetttt gggggeaace tegggegage agtettecag
444 gecaagaage gggttetega aceteteggt ceggttgagg aagetgetaa gaeggeteet
446 ggaaagaaga gaccggtaga accgccacct cagcgttccc ccgactcctc cacgggcatc
448 ggcaagaaag gccagcagcc cgctaaaaag agactgaact ttggtcagac tggcgactca
450 gagtcagtcc ccgaccctca accaatcgga gaaccaccag caggcccctc tggtctggga
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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/573,600

DATE: 04/06/2006 TIME: 10:49:36

Input Set : A:\UPN-P3230-sequence listing.txt

Output Set: N:\CRF4\04062006\J573600.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date